

CLAIMS

1. A radio communication apparatus that performs asymmetrical communication, said radio communication apparatus comprising:

5 desired signal power measuring means for measuring desired signal reception power of a plurality of slots for each slot;

interference signal power measuring means for measuring interference signal reception power;

10 power control information generating means for generating transmission power control information of each slot from said desired signal reception power and said interference signal reception power; and

15 transmitting means for transmitting said transmission power control information of each slot through one slot.

2. The radio communication apparatus according to claim 1, further comprising averaging means for
20 calculating an average value of desired signal reception power over the plurality of slots, wherein said power control information generating means generates transmission power control information of each slot from the average value of said desired
25 signal reception power and said interference signal reception power.

3. A radio communication apparatus that performs asymmetrical communication with the radio

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communication apparatus described in claim 1, said radio communication apparatus comprising:

isolating means for isolating transmission power control information of each slot from a received signal;

transmission power controlling means for controlling transmission power of each transmission slot based on said transmission power control information of each slot; and

amplifying means for amplifying transmitting data based on control of said transmission power controlling means.

4. A radio communication apparatus that performs asymmetrical communication, said radio communication apparatus comprising:

first reception quality measuring means for measuring reception quality of the entirety of a plurality of slots;

second reception quality measuring means for measuring reception quality of each slot;

reference power calculating means for calculating transmission reference power of each slot based on said reception quality of the entirety of the plurality of slots and said reception quality of each slot; and

transmitting means for transmitting information of said transmission reference power of each slot through one slot.

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5. The radio communication apparatus according to claim 4 wherein said reference power calculating means adds said reception quality of the entirety of the plurality of slots and said reception quality of each slot to calculate transmission reference power of each slot.

6. The radio communication apparatus according to claim 4, wherein said first reception quality measuring means measures said reception quality of the entirety of the plurality of slots based on a CRC checking result.

7. The radio communication apparatus according to claim 4, further comprising desired signal power measuring means for measuring desired signal reception power of the plurality of slots for each slot; and interference signal power measuring means for measuring interference signal reception power, wherein said second reception quality measuring means measures reception quality of each slot based on desired signal reception power to interference signal reception power.

8. The radio communication apparatus according to claim 7, further comprising averaging means for calculating an average value of desired signal reception power over the plurality of slots, wherein said second reception quality measuring means measures reception quality of each slot based on the average value of said desired signal reception power

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and reception power of said interference signal.

9. A radio communication apparatus that performs asymmetrical communication with the radio communication apparatus described in claim 4, said
5 radio communication apparatus comprising:

isolating means for isolating information of transmission reference power of each slot from a received signal;

transmission power controlling means for
10 controlling transmission power of each transmission slot based on said information of transmission reference power of each slot; and

amplifying means for amplifying transmitting data based on control of said transmission power
15 controlling means.

10. A base station apparatus mounting a radio communication apparatus thereon, said radio communication apparatus that performs asymmetrical communication comprising:

20 desired signal power measuring means for measuring desired signal reception power of a plurality of slots for each slot;

interference signal power measuring means for measuring interference signal reception power;

25 power control information generating means for generating transmission power control information of each slot from said desired signal reception power and said interference signal reception power;

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and

transmitting means for transmitting transmission power control information of each slot through one slot.

5 11. A communication terminal apparatus mounting a radio communication apparatus thereon, said radio communication apparatus that performs asymmetrical communication comprising:

desired signal power measuring means for
10 measuring desired signal reception power of a plurality of slots for each slot;

interference signal power measuring means for measuring interference signal reception power;

power control information generating means for
15 generating transmission power control information of each slot from said desired signal reception power and said interference signal reception power; and

transmitting means for transmitting
20 transmission power control information of each slot through one slot.

12. A transmission power controlling method, at one radio communication apparatus that performs asymmetrical communication, said method comprising
25 the steps of:

measuring desired signal reception power of a plurality of slots for each slot;

measuring interference signal reception

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power;

generating transmission power control
information of each slot from said desired signal
reception power and said interference signal
5 reception power; and

transmitting transmission power control
information of each slot through one slot,

at other radio communication apparatus, said
method comprising the steps of:

10 isolating transmission power control
information of each slot from a received signal; and
amplifying transmission power of each
transmission slot based on said transmission power
control information of each slot data.

15 13. The transmission power controlling method
according to claim 12, wherein an average value of
desired signal reception power is calculated over
the plurality of slots, and transmission power
control information of each slot is generated from
20 the average value of said desired signal reception
power and said interference signal reception power.

14. A transmission power controlling method,
at one radio communication apparatus that performs
asymmetrical communication, said method
25 comprising:

measuring reception quality of the entirety of
a plurality of slots;

measuring reception quality of each slot;

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calculating transmission reference power of each slot based on said reception quality of the entirety of the plurality of slots and said reception quality of each slot; and

5 transmitting information of said transmission reference power of each slot through one slot,

at other radio communication apparatus, said method comprising the steps of:

10 isolating information of transmission reference power of each slot from a received signal; and

amplifying transmission power of each transmission slot based on said information of transmission reference power of each slot.

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